

**Achievement of Market-Friendly Initiatives and Results Program
(AMIR 2.0 Program)**

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**Rates of Return on Social Security
Corporation Investments (1985 – 2001) for the
Social Security Investment Commission**

Final Report

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Data Page

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Net Contributions

Net excess revenues

Beginning balance (Investment Assets)

Ending balance (Investment Assets)

Gross rate of return

Beginning balance (Total Assets)

Ending balance (Total Assets)

Net rate of return

Abstract

The purpose of this paper is to present annual rates of return on Social Security Corporation investments from 1985 through 2001. Selection of this time period was due to availability of data, which come from annual reports 1984 through 2001 as published by the Social Security Corporation. Annual return calculations are for the total portfolio (all components in portfolio and all assets in each component) with no attempt at disaggregation.

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Executive Summary

The annual compound rate of return for the entire 26-year period is 11.1 percent using investment assets as the base of calculation and 11.5 percent using total assets as the base. Gross returns (using investment assets) range from a low of 3.4 percent (1993) to a high of 28.9 percent (1985), whereas net return (using total assets) range from a low of 4.9 percent to a high of 29.8 percent (1985).

When interpreting these data, the reader must exercise certain caution. To begin with, all data used in calculating rates of return are based on book values, and not market values. Book values are suspect due to the particular account practice employed by the SSC at any point in time, which appear to have changed three different times during the period cover by this analysis in 1996, 1994, and 1990.

It may also be tempting to conclude that the Corporation's investment results were decreasing over the entire 26-year period due to poor investment policies. While some of the declining results may be due to poor policies (we cannot tell without knowing the Corporation's specific policies and observing an acceptable benchmark over the same period of time for comparison proposes), there are two factors that need to be recognized. First, the asset base of the plan grew dramatically over the 26-year period from an initial investment value of something over JD 89 million in 1985 to something over JD 1.3 billion in 2001. This increase represents a 15-fold growth in assets and, quite reasonably, creates a challenge for investment purposes.

Another factor some may suggest that accounts for the decline in returns over the 26-year period is the drop in interest rates over the past few years. While this factor may have exerted some influence, it is highly doubtful that interest rates could account for the steady decline in returns over the entire 26-year period. Over this longer period of time, the market has seen both increasing as well as decreasing interest rates in a pattern that generally follows the business cycle. If declining interest rates were a major factor driving declining rates of return, we would have seen both increasing and decreasing investment return that would have generally coincided with the various interest rate cycles from 1985 to 2001. This has not been the case.

Body of Report

In order to evaluate the Social security Corporation's investment results from 1985 to 2001, the table below presents rates of return that are calculated using two different methodologies: (1) gross return based on investment assets, and (2) net returns based on total assets. Total assets differ from investment assets by adding several items to investment assets including fixed assets (net of depreciation), contributions pending settlement, subscriptions due from subscribers, accrued interest, accounts receivable, and cash on hand at banks. Although the resulting return calculations are technically different, they are not significantly different. The annual compound rate of return for the entire 26-years is 11.1 percent using investment assets as the base and 11.5 percent using total assets as the base. Gross returns (using investment assets) range from a low of 2.4 percent (1993) to a high of 28.9 percent (1985), whereas net returns (using total assets) range from a low of 4.9 percent to a high of 29.8 percent (1985).

When interpreting these data, the reader must exercise certain caution. To begin with, all data used in calculating rates of return are based on book values, and not market values. Book values are suspect due to the particular accounting practice employed by the SSC at any point in time, which appear to have changed three different times during the period covered by this analysis in 1996, 1994, and 1990. In addition, book values are dependent on an analyst's subjective judgments when estimating the value of illiquid assets such as real estate projects and non-traded equities. The result is that two different analysts could arrive at two very different values for the same asset with neither analyst being wrong.

A final reason for exercising caution is because accounting for actively traded equities using book values underestimates the true market value of most equities that produces hidden values not reflected in the return calculation. In short, basing return calculations on book values smooths the data in ways that distorts the true market value of the assets and, thus, places a negative bias on the results presented here. As a consequence, a comparison between rates of return presented here and returns on a market index such as the Amman Stock Exchange Index would not be a fair comparison due to the fact that the Index is based on market values, and not book values.

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Investing a relatively small amount of money in a small country with limited investment opportunities is much easier than investing a large amount of money in the same small country. In other words, over this 26-year period, a fast growing amount of money has been chasing a slower growing number of investments. This fact, alone, could account for much of the drop in rates of return over time as many of the more attractive investments were picked off the investment opportunity schedule in the beginning of the period leaving less attractive investment opportunities toward the end of the period. This conclusion is supported by observing the large buildup of cash in the SSC investment portfolio over the past several years, which needs to find suitable investment outlets.

Another factor some may suggest that accounts for the decline in returns over the 26-year period is the drop in interest rates over the past few years. While this factor may have exerted some influence, it is highly doubtful that interest rates could account for the steady decline in returns over the entire 26-year period. Over this longer period of time, the market has seen both increasing as well as decreasing interest rates in a pattern that generally follows the business cycle. If declining interest rates were a major factor driving declining rates of return, we would have seen both increasing and decreasing investment return that would have generally coincided with the various interest rate cycles from 1985 to 2001. This has not been the case.

Table
Rate of Return Calculations
Social Security Corporation Investments, 1985 – 2001
(data in thousands)

	Excess	Contributions	Benefits	Net	Net	Begin Balance	End Balance	Gross	Begin Balance	End Balance	Net
	Revenues	from SS Plan	Paid	Contributions	Excess Revenues	(Invest Assets)	(Invest Assets)	Rate of	(Total Assets)	(Total Assets)	Rate of
	(1)	(2)	(3)	(4) = (2) - (3)	(5) = (1) - (4)	(6)	(7)	(8)	(9)	(10)	(11)
1985							89,072			99,875	
1986	37,382	38,331	5,312	3,019	4,363	89,072	119,820	289%	99,875	134,665	298%
1987	44,940	45,015	7,408	3,607	7,233	119,820	166,615	239%	134,665	179,807	274%
1988	44,794	43,521	9,111	3,410	10,384	166,615	198,189	178%	179,807	223,123	178%
1989	46,550	47,207	10,997	3,620	12,340	198,189	243,539	175%	223,123	270,192	151%
1990	51,672	48,280	14,668	3,372	17,980	243,539	294,411	118%	270,192	321,220	118%
1991	54,988	51,099	17,690	3,349	21,599	294,411	347,536	114%	321,220	364,461	116%
1992	60,529	53,753	18,175	3,558	24,951	347,536	415,861	120%	364,461	442,19	101%
1993	67,691	61,500	20,180	4,130	26,371	415,861	484,348	98%	442,19	516,410	95%
1994	82,531	71,886	23,409	4,877	34,054	484,348	555,421	34%	516,410	591,16	91%
1995	85,047	80,088	28,355	5,173	33,304	555,421	617,110	88%	591,16	667,006	89%
1996	102,941	90,372	32,854	5,517	45,424	617,110	706,642	69%	667,006	732,82	85%
1997	116,167	104,078	41,467	6,311	53,556	706,642	815,889	76%	732,82	908,88	76%
1998	136,107	119,189	50,179	6,870	67,367	815,889	937,214	63%	908,88	1,046,609	75%
1999	109,554	126,577	57,486	6,981	40,473	937,214	1,050,411	76%	1,046,609	1,159,440	68%
1999	138,11	142,624	66,665	7,609	75,752	1,050,411	1,208,365	76%	1,159,440	1,319,804	71%
2000	127,008	153,057	79,628	7,329	53,479	1,208,365	1,334,738	59%	1,319,804	1,499,181	49%
2001	159,224	178,297	104,257	74,041	85,183	1,334,738	1,491,039	52%	1,499,181	1,610,597	59%
Geometric Annual Compound Rate of Return								118%			115%

Notes:

1. All data taken from various annual reports published by the Social Security Corporation. My thanks to Asma Abu-Taleb for compiling these data.
2. Apparently, the SSC altered the way it presented data in 1996, 1994, and 1990. These alterations do not appear to significantly affect the return calculations shown here.
3. Net Rate of Return = $((\text{col } 7 - (.5 * \text{col } 5)) / (\text{col } 6 + (.5 * \text{col } 5))) - 1$.
4. Gross Rate of Return = $((\text{col } 10 - (.5 * \text{col } 5)) / (\text{col } 9 + (.5 * \text{col } 5))) - 1$.
5. Return calculations based on book values, not market values.

Conclusions

Data presented in this analysis show that the Social Security Corporation's investment over the period from 1985 to 2001 resulted in an annual compound rate of return of approximately 11 percent. It was further shown that these returns have declined over the entire 26-year period from a high of approximately 29 percent in 1985 to a current return of something over 5 percent in 2001. A possible reason for this decline is the large growth rate in assets relative to a slower growth rate in attractive investments throughout the country. If this is the cause, which seems plausible, the SSC's job of finding more profitable investments is becoming increasingly difficult.